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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,305	03/29/2001	Kenji Miharu	SPO-593	6732

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Sherman & Shalloway
413 North Washington Street
Alexandria, VA 22314

EXAMINER

CHEN, VIVIAN

ART UNIT	PAPER NUMBER
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1773

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DATE MAILED: 04/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,305

Applicant(s)

MIHARU ET AL.

Examiner

Vivian Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by KELCH ET AL (US 5,712,031).

KELCH ET AL discloses a laminate film comprising a polyester substrate layer coated with an adhesive layer comprising a terpolymer of ethylene, 3-10 wt% ethylenically unsaturated carboxylic acid, and 3-25 wt% methyl acrylate or methacrylate, wherein the adhesive layer is applied to the substrate layer by extrusion (lines 9-20, 42-50, col. 3; line 37, col. 4).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1-2, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over KELCH ET AL (US 5,712,031).

Claims 1-2 are rejected under 35 U.S.C. § 102(b) as being anticipated by KELCH ET AL as stated above. However, in the event the claims are not anticipated, the claims are obvious for the following reasons:

KELCH ET AL discloses a laminate film comprising a polyester substrate layer coated with an adhesive layer comprising a terpolymer of ethylene, 3-10 wt% ethylenically unsaturated carboxylic acid, and 3-25 wt% methyl acrylate or methacrylate, wherein the adhesive layer is extrusion coated onto the substrate layer (lines 9-20, 42-50, col. 3; line 37, col. 4) and wherein the film can surface-treated prior to coating.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply a conventional surface pretreatment such as oxidation to the polyester substrate layer prior to extruding the ethylene terpolymer coating in order to improve interlayer adhesion. One of ordinary skill in the art would have adjusted the degree of surface modification as indicated in claim 6 depending on the materials used.

5. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over SMITH, JR. (US 4,732,944) in view of REES (US 3,471,460) and ULLMANN'S ENCYCLOPEDIA OF INDUSTRIAL CHEMISTRY (hereinafter ULLMANN'S).

SMITH, JR discloses a laminates comprising a polyester film layer, an ionomer layer, and optionally an additional plastic layer wherein the ionomer is typically derived from ethylene, (meth)acrylic acid, and/or (meth)acrylate wherein the ionomer may be partially

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neutralized with up to 90% of a metal cation such as sodium (Figure 11; line 62, col. 4 to line 15, col. 5; lines 43-55, col. 8; lines 38-47, col. 11) as recited in claims 1-4. However, the reference does not explicitly disclose the recited terpolymer.

REES discloses that it is well known in the art to utilize ethylene terpolymers comprising at least 50 mol% ethylene, 0.2-25 mol% unsaturated carboxylic acid, and up to 49.8 mol% of a third monomer such as methyl methacrylate or ethyl acrylate (line 30, col. 1 to line 72, col. 2) as the basis for modified resins with improved mechanical and elastic properties.

ULLMANN'S discloses that it is well known in the art to use extrusion to apply coatings to preexisting films and also that it is well known in the art to surface treat films prior to coating in order to improve interlayer adhesion and coating characteristics (section 2.4).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply a conventional surface pretreatment such as oxidation to the polyester substrate layer prior to using a conventional coating method such as extrusion to form an ionomeric layer on a polyester substrate in order to improve interlayer adhesion. One of ordinary skill in the art would have selected a polar material which is compatible and adherent to the ionomer layer for use in the one or more plastic base layers of the laminate (as indicated in claims 5, 7) and/or selected the degree of surface modification of said base layer(s) as indicated in claim 6 in order to prevent delamination.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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LIND ET AL (US 5,679,422) discloses films containing ionomer layers.


MITCHELL (US 5,106,916) discloses ethylene/(meth)acrylic acid/(meth)acrylate terpolymers.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vivian Chen whose telephone number is (703) 305-3551. The examiner can normally be reached on Monday from 8:30 AM to 6 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (703) 308-2367. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3601.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

March 25, 2002


Vivian Chen
Primary Examiner
Art Unit 1773